UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/607,864	06/30/2000	Andrew Bencich Woodside	24760A	9951

7590 04/09/2003

John A. Molnar, Jr.
Parker-Hannifin Corporation
6t035 Parkland Boulevard
Cleveland, OH 44124-4141

EXAMINER
FERGUSON, LAWRENCE D

ART UNIT	PAPER NUMBER
1774	16

DATE MAILED: 04/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/607,864	WOODSIDE ET AL.	
	Examiner	Art Unit	
	Lawrence D Ferguson	1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 January 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *15-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *15-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

1. This action is in response to the RCE mailed January 21, 2003. Claim 15 was amended rendering claims 15-27 pending.

New Matter - 35 U.S.C. 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 2 rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. '...being selected to be impregnable into said core without substantial pressurization' is not supported by the specification.

Claim Rejections – 35 USC § 103(a)

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 15-23 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kosuga et al (U.S. 4,960,642).

6. Kosuga shows pellets for making electromagnetic wave shielding material comprising carbon conductive fibers (column 2, lines 26-27), an organic coating of a thermoplastic resin oligomer having a viscosity of not more than 10,000 centipoises when melted (column 1, lines 21-28 and claim 1), and a thermoplastic resin coating (polymer coating) (claim 1). Kosuga shows that the fibers have a length of 6mm (column 4, line 45). Kosuga further shows that the conductive fibers are bundled in groups of 1,000 to 10,000 (column 2, lines 30-32). The reference shows that the thermoplastic resin coating comprises acrylonitrile-butadiene-styrene copolymer (claim 3). Though Kosuga shows that the organic thermoplastic resin oligomer material has a viscosity of no more than 10,000 centipoises when melted (claim 1), Kosuga does not show that the pellets have a viscosity at temperatures of from 80 C-180 C as in instant claims 15 and 19-22. Kosuga uses the same organic thermoplastic resin oligomer materials as in Applicants' invention. Thus, it would have been obvious to one of ordinary skill in the art to use an organic material which has a viscosity of no greater than 1500 centipoises at temperature ranges of 80 C-180 C since it is known in the art that such oligomers would have those viscosities.

Claim Rejections – 35 USC § 103(a)

7. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kosuga et al (U.S. 4,960,642) in view of Kobayashi et al (U.S. 4,356,228).

8. Kosuga is relied upon for claims 15-23 and 25-27. Kosuga shows that the organic thermoplastic resin oligomers used to coat the conductive carbon fibers include polyester resins and ethylene-ethylacrylate resins (claims 2-4). Kosuga does not show that the organic thermoplastic resin oligomers are comprised of those listed in instant claim 24.

Kobayashi teaches a fiber-reinforced moldable sheet comprising a thermoplastic resin and reinforcing agents of carbon fibers incorporated into the thermoplastic resin (Abstract). Kobayashi teaches that the thermoplastic resins used include polyesters (column 3, lines 64-68), poly(bisphenol A carbonate), polysulfones, styrene resins, and acrylic resins (column 4, lines 1-4). Kosuga and Kobayashi are analogous art because they are both from the field of carbon fiber material. It would have been obvious to one of ordinary skill in the art to use bisphenol A resin in the organic thermoplastic resin oligomer coating of Kosuga because bisphenol A, polyester, and acrylic resins are thermoplastic resinous materials used in order to obtain an impregnated product (column 4, lines 1-23).

Response to Arguments

9. Applicant's arguments in regard to rejection made under 35 USC 103(a) as being unpatentable over Kosuga et al (U.S. 4,960,642) have been considered but are unpersuasive. Applicant argues Kosuga does not show that the organic thermoplastic resin oligomers are comprised of those listed in instant claim 24. Claim 24 was not rejected solely be the Kosuga reference but by Kosuga in view of Kobayashi, therefore this argument is moot. Applicant argues the very low viscosity materials encompassed by claim 19-22 would appear to be far outside the range of materials contemplated by Kosuga because Kosuga materials require the use of extruders or other high-pressure application to effect the impregnation of the fibers, whereas the instantly claimed materials may be impregnated using a bath or other low pressure means. Applicant is arguing process limitations, which are not under consideration (see In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966). Furthermore, Applicant amended claim 15 to claim 'without substantial pressure' but argues using a low pressure means to impregnate the article. A low pressure means is equivalent to a pressure means. Kosuga shows organic thermoplastic resins which have a viscosity of no more than 10,000 centipoises, which includes 1500 centipoises. This clearly falls with the ranges which Applicant's claim in instant claims 15 and 19-22.

Applicant's arguments in regard to rejection made under 35 USC 103(a) as being unpatentable over Kosuga et al (U.S. 4,960,642) in view of Kobayashi et al (U.S.

4,356,228) have been considered but are unpersuasive. Applicant argues Kosuga does not disclose the oligomers listed in claim 24. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Applicant argues the resins used in Kobayashi appear to be used as a matrix resin rather than coated fibers in a matrix resin to form a pellet. Bisphenol A, polyester, and acrylic resins are thermoplastic resinous materials used in order to obtain an impregnated product (column 4, lines 1-23). Kobayashi shows the thermoplastic resins are conventional and can be used in a matrix resin, which ultimately is used to form a pellet.

Applicant argues the claimed and reference materials can have different viscosities even if the chemical constituents of those materials are the same. This argument lacks sufficient support. Applicant argues independent claim 15 was amended to include 'selected to be impregnable into said core without substantial pressurization.' This amended limitation has been found to be new matter and the argument is therefore moot. Applicant argues Kosuga requires the use of pressure to impregnate the fibers whereas the instantly claimed materials may be impregnated using low pressure. Whether high or low, both the references and instantly claimed invention use pressure to impregnate the fibers. Furthermore, whether using a bath or dip coating, Applicant is arguing limitations not set forth in the claims.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., whether using a bath, dip coating or amount of pressure) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant argues the combined teaching lacks motivation to combine. Kosuga and Kobayashi are analogous art because they are both from the field of carbon fiber material. It would have been obvious to one of ordinary skill in the art to use bisphenol A resin in the organic thermoplastic resin oligomer coating of Kosuga because bisphenol A, polyester, and acrylic resins are thermoplastic resinous materials used in order to obtain an impregnated product (column 4, lines 1-23). Applicant argues the resins in Kobayashi appear to be used as the matrix resin rather than as a coating which is applied to the fibers and are encased in a matrix resin to form a pellet. . Bisphenol A, polyester, and acrylic resins are thermoplastic resinous materials used in order to obtain an impregnated product (column 4, lines 1-23). Kobayashi shows the thermoplastic resins are conventional and can be used in a matrix resin, which ultimately is used to form a pellet.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence Ferguson whose telephone number is (703)

305-9978. The examiner can normally be reached on Monday through Friday 8:30 AM – 4:30PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on (703) 308-0449. Please allow the examiner twenty-four hours to return your call.

The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2351.

Lawrence D. Ferguson
Examiner
Art Unit 1774

CYNTHIA H. KELLY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700